

What is claimed is:

1 1. A photomask comprising:
2 a shifter; and
3 a trim mask for blocking transmission of a particular light passing
4 through the shifter from reaching a wafer, the trim mask including a first part
5 having a chrome mask and a second part having a phase shift mask.

1 2. A photomask as claimed in claim 1, wherein the first part
2 corresponds to a region on which a gate pattern including a gate of a chip
3 and a predetermined portion of a field poly extending from the gate will be
4 placed, and the second part corresponds to a region on which a field poly
5 pattern comprised of the field poly, but not the first part, will be placed.

1 3. A photomask as claimed in claim 1, wherein boundaries
2 between the first and second parts at two opposite sides of the trim mask are
3 aligned with two opposite edges of an imaginary layer, which corresponds to
4 two opposite sides of the trim mask and is introduced when designing the
5 trim mask.

1 4. A photomask as claimed in claim 2, wherein boundaries
2 between the first and second parts at two opposite sides of the trim mask are
3 aligned with two opposite edges of an imaginary layer, which corresponds to

4 two opposite sides of the trim mask and is introduced when designing the
5 trim mask.

1 5. A photomask as claimed in claim 1, wherein boundaries
2 between the first and second parts at one of two opposite sides of the trim
3 mask are a predetermined distance away from one of two opposite edges of
4 an imaginary layer, which corresponds to the two opposite sides of the trim
5 mask and is introduced when designing the trim mask.

1 6. A photomask as claimed in claim 2, wherein boundaries
2 between the first and second parts at one of two opposite sides of the trim
3 mask are a predetermined distance away from one of two opposite edges of
4 an imaginary layer, which corresponds to the two opposite sides of the trim
5 mask and is introduced when designing the trim mask.

1 7. A photomask as claimed in claim 6, wherein the predetermined
2 distance is no greater than the wavelength of light illuminated on the
3 photomask.

1 8. A photomask as claimed in claim 6, wherein the predetermined
2 distance is about 2480 Å.

1 9. A photomask as claimed in claim 1, wherein the other opposite
2 edges of the trim mask are placed within corresponding edges of the
3 imaginary layer.

1 10. A method for manufacturing a photomask comprising:
2 preparing a shifter; and
3 forming a trim mask for blocking transmission of a particular light
4 passing through the shifter from reaching a wafer, the trim mask having a
5 first part including a chrome mask and a second part including a phase shift
6 mask.

1 11. The method as claimed in claim 10, wherein the first part
2 corresponds to a region on which a gate pattern including a gate of a chip
3 and a predetermined portion of a field poly extending from the gate will be
4 placed, and the second part corresponds to a region on which a field poly
5 pattern comprised of the field poly, but not the first part, will be placed.

1 12. A method as claimed in claim 11, wherein forming the trim
2 mask comprises:

3 preparing a substrate;
4 sequentially forming a shift material layer and a chrome layer having
5 the same size on the substrate; and
6 forming a chrome layer pattern having a size smaller than the shift
7 material layer by patterning the chrome layer.

1 13. A method as claimed in claim 12, wherein forming the chrome
2 layer pattern comprises:
3 forming a mask having a length smaller than the chrome layer on the
4 shift material layer; and
5 removing the chrome layer exposed by the mask.

1 14. A method as claimed in claim 13, wherein the shift material
2 layer is formed of MoSi.

1 15. A method as claimed in claim 13, wherein the mask is formed
2 of photoresist.

1 16. A method as claimed in claim 12, wherein the substrate is
2 formed of quartz.

1 17. A method as claimed in claim 11, wherein forming the trim
2 mask comprises:
3 sequentially forming a shift material layer and a chrome layer having a
4 size smaller than the shift material layer on a substrate; and
5 patterning the shift material layer to form a patterned shift material
6 layer that is larger than the chrome layer.